

Applicant : Randall B. Lauffer et al.
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Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1.-63. (Cancelled).

64. (Currently Amended) A method for monitoring treatment of a tissue comprising HSA in a patient, said method comprising:

a) administering a contrast agent to said patient, ~~said contrast agent comprising an organic chelating agent complexed to a paramagnetic metal ion, wherein said contrast agent is selected from the group consisting of MS-315, MS-317, MS-322, MS-323, MS-325, MS-326, MS-327, and MS-328;~~

~~wherein said organic chelating agent is selected from the group consisting of DTPA, DOTA, DTPA-BMA, and HP-DO3A;~~

~~wherein said organic chelating agent is covalently bound to a structure: (L)_m-SDTBM either at a methyl carbon of an acetate chelating moiety of said organic chelating agent or at an ethylene carbon backbone moiety of said organic chelating agent,~~

~~wherein L is a physiologically compatible linker and wherein m can be 0 to 4;~~

~~wherein said SDTBM comprises zero to six linear or branched alkyl groups having 1 to 10 carbon atoms; zero one to five cycloalkyl groups; zero to five aryl groups; or combinations thereof, wherein said alkyl, cycloalkyl, or aryl groups can be optionally and independently substituted with from 1 to 5 ether, carboxylate, or sulfate moieties~~

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~~said contrast agent further having:~~

~~1) an R1 observed value in a 4.5 wt% solution of HSA at 25 °C of greater than about $10 \text{ mM}^{-1} \text{ sec}^{-1}$; and~~

~~2) a percent binding to HSA in a 4.5 wt%, pH 7.4 solution of HSA of greater than about 10%;~~

b) subjecting said patient to magnetic resonance imaging to determine an initial signal intensity value in a region of interest of said undesired tissue;

c) applying an interventional therapy to at least a portion of said undesired tissue in order to treat said undesired tissue, said interventional therapy selected from the group consisting of a thermal energy generation, a cryoablation, an injection of a denaturing liquid, an injection of a chemotherapeutic agent, and a photodynamic therapy; and

d) contemporaneously monitoring with magnetic resonance imaging a change in said initial signal intensity value in said region of interest of said undesired tissue during said interventional therapy; and

~~e) stopping said interventional therapy application when said change in said initial signal intensity value in said region of interest of said undesired tissue is more than about a 10% reduction in said initial signal intensity value.~~

65.-78. (Cancelled).

79. (Previously Presented) The method of claim 64, wherein said tissue is selected from the group consisting of cancerous tissue, tumorous tissue, and neoplastic tissue.

80. (Previously Presented) The method of claim 79, wherein said tissue is cancerous tissue.

81. (Previously Presented) The method of claim 64, wherein said interventional therapy application is said generation of thermal energy, and wherein said thermal energy is

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generated by a source selected from the group consisting of one or more focused ultrasound waves, radiofrequency waves, microwaves, and lasers.

82.-84. (Cancelled).

85. (New) The method of claim 64, further comprising:

e) stopping said interventional therapy application when said change in said initial signal intensity value in said region of interest of said undesired tissue is more than about a 10% reduction in said initial signal intensity value.